

Assessment Rubric – How the world works

The way structures are built depends on the forces that impact upon them.

Task - Demonstrate your knowledge of structures and forces by designing (and creating) a structure with an explanation of how it would be built and forces that would impact upon it.

	Beginning – 1	Consolidating - 2	Proficient – 3	Advanced – 4
What are forces? (Form)	<ul style="list-style-type: none"> ● List some of the forces ● Describe how a chosen force works 	<ul style="list-style-type: none"> ● Name and explain 2 different forces and describe how these work 	<ul style="list-style-type: none"> ● Name and explain several different forces eg Pressure, compression, tension, bending, gravity, torsion, shear force, mass, weight ● Draw and label a diagram to demonstrate how a force works 	<ul style="list-style-type: none"> ● Name and explain several different forces eg Pressure, compression, tension, bending, gravity, torsion, shear force, mass, weight ● Draw and label detailed diagrams to demonstrate how forces works
What are structures? (Form)	<ul style="list-style-type: none"> ● Define what a structure is and give examples with support 	<ul style="list-style-type: none"> ● Define what a structure is and give 2 examples 	<ul style="list-style-type: none"> ● Define what a structure is and give several examples eg: plane, car, train, boat, stadium, tunnel, arch, pyramids, bridge, skyscraper, statues, monuments 	<ul style="list-style-type: none"> ● Define what a structure is and give several examples ● Give information about a specific structure
What are the processes for building structures? (Function)	<ul style="list-style-type: none"> ● Draw and label a picture of a chosen structure including some structural parts ● Demonstrate a basic understanding of mathematical concepts involved in structures eg: shape, length, etc 	<ul style="list-style-type: none"> ● Explain how a chosen structure is built ● Draw and label a diagram of a chosen structure including the structural parts ● Demonstrate a basic understanding of mathematical concepts involved in structures eg: shape, length, perimeter etc 	<ul style="list-style-type: none"> ● Create a simple flowchart to show how a chosen structure is built and the the steps undertaken when building/creating this structure ● Draw and label a detailed diagram of a structure including the structural parts ● Demonstrate understanding of mathematical concepts involved in structures eg: shape, length, area, perimeter, volume, angles, scale etc 	<ul style="list-style-type: none"> ● Create a detailed flowchart to show how a chosen structure is built and the the steps undertaken when building/ creating this structure ● Draw and label, using technical language, a detailed diagram of the chosen structure including the structural parts ● Demonstrate understanding of mathematical concepts involved in structures eg: shape, length, area, perimeter, volume, scale etc
How does our knowledge of forces impact our creation of structures? (Causation - impact)	<ul style="list-style-type: none"> ● On your picture list which forces will impact the design of the structure and explain with support 	<ul style="list-style-type: none"> ● Explain which forces will impact the design of the structure 	<ul style="list-style-type: none"> ● Explain which forces will impact the design of the structure (this could be on your flowchart and diagram) 	<ul style="list-style-type: none"> ● Explain in detail which forces will impact the design of the structure ● Explain how the design of the structures has been improved/changed over time